

# **Rhode Island Water Resources Board Water Management System Implementation Team**

## **Meeting Minutes** Wednesday, September 1, 2004

### **Action Items:**

- **Provide an overlay of watershed, water resources and sensitive areas within the Lower Blackstone based on USGS studies. Include municipal boundaries.**
- **Obtain information on the site specific PUC model**
- **Prepare identified questions that need answers on state, regional, and local levels for next meeting**
- **Continue to submit comments, recommendations, and additional information to Kathy Crawley or Beverly O’Keefe on draft water budget materials: Chapter 1 and Chapter 2.**

### **1. Welcome and Approval of Minutes -**

Mr. Dan Varin called the meeting to order at 9: 15 a.m. He welcomed attendees to the fifth meeting of the Water Resources Board Water Management System Implementation Team. He requested approval of the August 4, 2004 meeting minutes. A motion to approve the minutes was made by and seconded. After discussion, the minutes were approved as corrected. Mr. Varin next turned the meeting over to Ms. Kathleen Crawley, meeting facilitator and newly appointed Acting General Manager.

Ms. Crawley welcomed members and referenced the materials that will support today’s discussion that include:

August 26, 2004 Email Attachments and References  
September 1, 2004 Meeting Agenda  
August 4, 2004 Implementation Team Meeting Minutes  
August 17, 2004 Technical Subcommittee Meeting Minutes  
Draft Municipal Fact Sheet Template  
Lower Blackstone Fact Sheet, Revised

Ms. Crawley stated the Technical Subcommittee met on August 17, 2004 to work on the technical aspects of developing a “water budget.” The sub-committee met for over 3 hours at the Department of Environmental Management. She reported that the meeting was productive and that it looks like there will be several meetings to wrangle out the technical details that will be reported by the committee. Dr. Anne Veeger and Ms. Emily Wild have been asked to brief members on the outcomes and conclusions of the meeting. She asked Dr. Veeger to provide the findings from the Technical Sub-Committee meeting.

### **2. Technical Sub-Committee Meeting Findings**

Dr. Veeger stated the primary focus of the first meeting was to address the issue how to determine a threshold where active management is going to kick in. Points included:

- **Level of acceptable risk:** The USGS reports outline 25<sup>th</sup>, 50<sup>th</sup>, and 75<sup>th</sup> percentiles, what these percentiles really mean and how they translate in terms of a person's actual experience on a year-to-year basis, and how to make use of this information to plan. A concrete example of the definition of the 25<sup>th</sup> percentile would be to look at a four year period. The result would be that, on average there would be enough water during three years but for one of those years there would not be enough water. Therefore, the use of the 25<sup>th</sup> percentile flow number as the amount of water available for consumptive use (in other words it is not going back into the system it is disappearing entirely) would run into trouble. This would be more than just stop watering your lawn, it would include all users and stakeholders – industrial, commercial, residential and agricultural – who would find that there just wasn't enough water – the pot wasn't big enough for all users. The sub-committee agreed that this is not a good scenario. A more conservative scenario – of the environment and the above-mentioned users (and the ecosystem) – who depend on water to conduct business, grow produce, and put into development – that depend on a certain level of water and that doesn't find itself on a regular basis having their business disrupted.
- **Acceptable level of risk:** (how often in a given number of years would be acceptable) to not have enough water. The group agreed in concept that a 1 in 20 year figure would be a useful marker for planning purposes. She stated there was agreement that the use of an exact number could lead to confusion because of the complexities involved with the definition of use – where in the basin the water is being removed, where in the basin the water is being returned, if it is being returned or transferred out of the basin. These technical questions come down to what is the use figure in a basin.
- **Identification of a management framework using the 5<sup>th</sup> and 10<sup>th</sup> percentiles** using the lower recorded values of August and September.:
- **Stressed Basin Identification:** Definition and use of percentiles to establish management triggers. For example, if a new user came into the basin with a certain level of use, the new user would have the responsibility of initiating an impact study.
- **Management Framework:** The overall framework for groundwater dominated basins with no surface water storage would use base flow – low base flow during the summer months would be used to define the available water. This would be a conservative approach to use for the environment and for different users, and ensure that adequate water supplies were available over a twenty-year period. In systems with a surface water storage component, the safe yield of the system would be added on top of the base flow component as long as required releases are included.
- **Withdrawal and Export Concepts:** The concept of use needs to be reviewed carefully because of the difference between a use which is exported out of the basin and none of the water is returned, and a use such as residential that uses a septic system in which water is returned but water quality issues must be considered.

Ms. thanked Dr. Veeger for presenting the subcommittee report. Ms. Crawley opened the meeting for discussion. Members began the consensus planning effort based on the agenda discussion items.

**Discussion:** The use of a 1 in 20 year threshold is similar to storm projections. One member stated that DEM and USGS are looking at the data points and numbers for increased reliability in prediction. Another member noted if the 1 in 20 year threshold is used, it still would not be unreasonable to have a low flow period that should trigger a management action similar to the Drought Plan. Concern was expressed that a set limit might send a message to withdraw to the established level rather than optimizing withdrawals. The example of Kent County Water Authority's (KCWA) failed application permit and the protection of aquatic life was discussed to highlight the complex issues. It was concluded that the use of the annual low flow figure based on a 1 in 20 year occurrence would be reasonable for management planning. Members also agreed that riverine, wetland, swamps and aquatic life must be protected and part of the proposed coefficients.

**Facilitator:** Ms. Crawley agreed that the management plan would identify different activities at different levels and in different arenas. For example, there will be improved integration between the Water Supply System Management Plans and Local Comprehensive Plans.

**Question:** Mr. Griffith asked for clarification on the 1 in 20 year threshold, asking if it were true that the figure would change as additional uses were identified?

**Response:** Dr. Veeger stated that the threshold figure would remain the same. If the established threshold is approached, then a management review would be triggered.

**Statement:** Stream gages should be placed on unregulated streams so the data can establish base flow information. This would provide needed information to support the proposed management plan. We have identified areas where stream gages are needed but we haven't gotten that far yet.

**Statement:** Based on our discussions, it appears that there will be two levels of management planning. A macro-level that identifies statewide water availability, and the micro-level that will provide a site specific analysis which hopefully will include localized issues. If a permitting process is part of the management plan these localized issues should be considered and minimized. The threshold numbers should be helpful tools for local planners and government.

**Statement:** The management planning process should identify what is allocable through a detailed analysis of topography, where new sources can be developed, etc. We should not rely on what developers prepare as this is beyond their capacity. We should provide guidance through a proactive preparation of the information.

**Facilitator:** I agree. The WRB through the water availability studies is doing this now, and the work is ongoing.

**Statement:** Mr. Varin stated that several months ago a meeting was held with KCWA to discuss their water development program. What we learned was that KCWA cannot afford to develop wells below a certain production. The economic factor is important.

**Discussion:** The state should develop a proactive analysis that municipalities can rely on. This would help to get ahead of the policy curve as no one has the capacity to do all of the work. One member noted that the science may never be developed sufficiently to solve all of the issues. The DEM statutory authority is to protect the wetland, and by statute the environment must be protected. There was agreement that a system should be developed but at this time the resources are not available.

**Question:** Do the USGS studies sensitive areas in the Blackstone, and could this level of analysis be made available to the local groups?

**Response:** Yes, the USGS sophisticated models can do this. In the MA stressed basin studies there is a plan with information on this. We have been conducting the preparatory work for this here in Rhode Island.

**Statement:** We are approaching this from the wrong direction. Where are the sensitive areas? We need an overlay of Jim's work prior to making decisions.

**Facilitator:** The WAPAC Priority Use subcommittee did some work on this and we may be able to provide some information on this at the next meeting. The committee tried to identify habitat areas but it is difficult.

**Question:** If developers conducted studies would it be useful to water suppliers?

**Response:** If a well won't produce what's needed, and I've spent 1 ½ years drilling wells, and reviewed the

USGS studies, then the state doesn't have the expertise to evaluate our work. No supplier will spend more money on this. In terms of water skimming, some areas don't have valleys for storage. Wells won't always help the situation. The Technical Subcommittee charge is to clarify and make simple the water resource terms for the layman to understand. The EPA mandated a plan to reach a MCL standard, we need a process to move forward to a solution-based approach.

**Statement:** I think there is a tool available to do a site specific analysis – the PUC model. It's not a perfect solution. An applicant at the Energy Facility Siting Board just stopped<sup>1</sup>...

**Statement:** I would like to address the response above regarding the depth of Pawcatuck valleys. During the Drought Management work, we provided 3 areas of the state as a planning tool (NW, SC, and Eastern) so planners could assess where they are in relation to the area.

**Break:** A ten-minute break was called at 10:10 am. The Implementation Team reconvened at 10:15 am.

**Facilitator:** Members were referred back to today's agenda for discussion on the Fact Sheet and Municipal Template.

**Statement:** The RI GIS may provide valuable information on the basin and sub-basin levels.

**Recommendation:** On the Municipal Template, separate the protected and critical resource sections.

**Discussion:** Members discussed the template. Questions were raised as to who would complete the template, where would the numbers come from, and who would allocate the water to each municipality, sub-basin, etc.

<sup>1</sup> RIGL 42-98-1-20, Energy Facilities Siting Board "is authorized to establish reasonable fees for investigations, applications...Applicants shall pay those fees..."  
Members questioned as to who would resolve conflicts, and would the WRB be the ultimate authority to answer the question as to how much water is available?

**Response:** The facilitator noted that a process must be developed using scientific information obtained from the water availability studies. The assumption is that some of the work will occur using the local comprehensive plans and the water supply system management plans. The broad guidance and goals come from this committee. We will need to depend on the municipalities and the watershed organizations for their support to help us answer these questions.

**Response:** It is my understanding that the first cut will be to incorporate water resource considerations into the community local comprehensive plan. Whether this becomes a main consideration in the development process is for the future.

**Statement:** Guidance and expectations is needed for people is needed, and may be a great opportunity as the resource is not limited to municipal boundaries.

**Statement:** I agree with the DEM position that we should look at tiers. This would create an opportunity for planners to look at the resource.

**Discussion:** The state should provide the tools and guidance to do this. WRB should think about their responsibilities and help communities to understand and cooperate on these water resource issues. This will require work on the local level by all interested state parties. The important, critical information and questions

should be identified, answered, and provided to the communities. This should include identification of potential water sites, protection of critical wetlands and aquifers, etc. The creation of a planning framework using overlays is recommended. It would appear that a layering process, perhaps using RI GIS, could provide a tool for planners.

**Question:** As concerns the wastewater component – will actual or permitted flow be used?

**Response:** The USGS studies use metered data, 15% is being used.

**Statement:** The use of watersheds as conveners is ok but they are not regulators and would be uncomfortable in that role. Options regarding the use of the watershed groups will need to be discussed.

**Statement:** We should not overwhelm planners with too much information, Our first action should be to provide a simplified report with our recommendations to the WRB.

**Statement:** In order for the template to be useful to planners, the planners should be involved in the design. Planners should provide information on what is needed. Smaller communities that depend on ground water supplies may have difficulty in completing this template. Assistance in completing the template including the provision of data will be needed. Buildout and population projections are just two important components that must be taken into consideration.

**Response:** Beth Collins, RI Economic Policy Council, will be conducting a survey with local planners to identify what the problems are in the communities. The WRB will provide the data. It is hoped that Beth's work in the Blackstone will help to define the recommended changes with the template. The overall framework will be defined in Chapter 1 – The Context.

**Recommendation:** GIS mapping should be more involved, and is a policy issue with RI GIS and Statewide Planning. There should be more coordination. The seasonality of the coefficients must be considered but the withdrawal data seems more generic.

**Facilitator:** We have good recommendations on how to improve the coefficients, and we expect the numbers to improve over time. What is the group comfort with the template at this point?

**Recommendation:** Seasonality should be included in the template.

**Response:** I am concerned that planners will be misled by the numbers. We should start at the regional level and back in to the local level.

**Response:** The information will be useful over time. The planners and politicians interest must evolve to the regional level over time. State involvement is needed for a consistent approach. I, as a planner, am glad to hear there is notice of how overwhelmed planners are with their responsibilities.

**Facilitator:** I encourage everyone to provide additional thoughts and comments as we proceed. These recommendations and comments are helping us to design a water management system for RI.

**Recommendation:** I think that the articulation of the questions that need to be answered is important. We've identified the questions and they should be prepared for the next meeting for review.

**Recommendation:** It would be useful to have watershed maps with an overlay of aquifers and municipal boundaries.

**Question:** How will the WRB come up with the amount of water available in a municipal area?

**Response:** That's why the template has to be changed. We have our straws in the same glass. The allocable water is for the future. (NOTE: Color maps of the watershed were provided as handouts during the June, 2004 meeting).

**Statement:** Looking at the context, we need to answer questions like – where does the state plan to grow, parameters, etc. Provide information on the 39 towns, and does the state provide guidance. What is the role of the state. Don't say "give us your town plan" but provide us with information and detail to help us plan.

**Question:** What is meant by "geographic specificity?" For example, Richmond that limits building to 50 units per year. Is that what the state needs?

**Discussion:** In less than 2 years a statewide housing plan will be available. The housing issue raises the question of education and building more schools. How do we solve the education dilemma? We don't want to build additional housing. It was noted that some towns may be ready to plan using these and other tools. One member remarked that these issues should be on the Growth Planning Council agenda. The questions are important and should be put on the table for discussion. One question is "will the state take a regulatory role to create a management scenario with levels and triggers to avoid counter-productive actions.

### **Adjournment**

Mr. Varin stated that the bewitching hour has arrived. He noted the Technical Sub-Committee would meet on Monday, September 20, 2004, starting at 1 pm at the DEM, Rm 280. He thanked members for their participation and noted that the WRB is pushing hard but are learning that there are options that can be implemented with this help of the Implementation Team. He asked for a motion to adjourn. The motion to adjourn was made and seconded. The meeting was adjourned at 11:10 AM.

The next meeting is scheduled for Wednesday, October 6, 2004.

Respectfully Submitted,

Beverly O'Keefe, Supervising Planner  
RI Water Resources Board

Meeting Attendees:

Adelman	Mark	Office of the Governor
Bray	Erin	Brown University
Campbell	Jim	US Geological Survey
Collins	Beth	RI Economic Policy Council
Combs	Walter	RI Department of Health
Crawley	Kathy	RI Water Resources Board
Dzykewicz	Andrew	RI Economic Policy Council
Flynn	Kevin	Cranston Planning
Griffith	Robert	RI Water Resources Board
Kerr	Meg	RI Rivers Council
Kilduff	Bob	Providence Water Supply Board
Mariscal	Juan	Warwick Sewer Authority
Marks	Eugenia	Audubon Society of RI
Meyer	Henry	Kingston Water District
Murray	Vin	South Kingstown Planning
O'Brien	John	RI Dept of Admin-Statewide Planning
O'Keefe	Beverly	RI Water Resources Board
Reitsma	Jan	General Public
Scott	Elizabeth	RI Environmental Management
Sobel	Allison	Brown University
Varin	Daniel	Chairman, RI Water Resources Board
Veeger	Anne	Univ. of RI-Geosciences
Ward	Harold	Pawcatuck Watershed
Wild	Emily	US Geological Survey